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Date: December 5, 2005

To: Examiner Ernesto GARCIA

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Facsimile Telephone Number: (571) 273-8300

Total Number of Pages (Includes Cover Sheet): 27

From: Song Zhu, Ph.D.

Phone: (202) 624-2500

Attorney Docket: 038738.49427US

User ID: 1350

Message: Re: *Application No. 09/726,589*

I hereby certify that an original of this Response to the Notification of Non-Compliant Appeal Brief dated November 3, 2005 is being faxed to Examiner GARCIA at the U.S. Patent and Trademark Office (fax number: (571) 273-8300) on December 5, 2005.

Song Zhu, Ph.D.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 09/726,589 Confirmation No. : 1848
First Named Inventor : Erik KRIMM
Filed : December 1, 2000
TC/A.U. : 3679
Examiner : Ernesto Garcia

Docket No. : 038738.49427US
Customer No. : 23911

Title : Gear Shift Mechanism Gate Plate Assembly and Method for
Producing Same

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

Sir:

This is in response to the Notification of Non-Compliant Appeal Brief dated November 8, 2005.

On February 3, 2005, Appellants appealed to the Board of Patent Appeals from the final rejection of Claims 1, 4, 8, 20, 24, and 25. The following is Appellants' Appeal Brief submitted pursuant to 37 C.F.R. §41.37.

Real Party in Interest

This application is assigned to DaimlerChrysler AG of Stuttgart, Germany, which is the real party in interest in this appeal.

Related Appeals and Interferences

Applicants, Applicants' legal representative and the assignee are not aware of any prior and pending appeals, judicial proceedings or interferences, which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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Status of Claims

Claims 5-7 are allowed. Claims 1, 4, 8, 20, 24, and 25 are finally rejected and form the subject of this appeal. Claims 2, 3, 9-19, 21-23, and 26-32 are cancelled.

Status of Amendments

Applicants filed an Amendment on August 9, 2005 to place Claims 5-7 in allowable form. The Amendment has been entered.

Summary of Claimed Subject Matter

Independent claim 1 is directed to a functional component as a gate plate of an automatic gear shift mechanism with a locking gate (see the specification at page 1, lines 5-10; and Figures 1-5). The functional component includes at least three stamped parts (1, 18, 19), which lie flat sandwiched against one another (see the specification at lines 6-20 of page 8, and lines 16-19 of page 9; and Figs. 4 and 5). The at least three stamped parts (1, 18, 19) are unreleasably connected to one another (see the specification from line 22 of page 10 to line 13 of page 11; and Figs. 4 and 5). Each stamped part has at least two engagement holes (4, 5) for engagement elements, and the engagement holes (4, 5) of the stamped parts (1, 18, 19) are arranged congruently with respect to one another (see the specification at lines 10-16 of page 6, lines 11-14 of page 8, and lines 16-19 of page 9; and Figures 1, 3, and 5). At least one of the middle stamped part's holes (4, 5) has a hole wall (8) which is provided with an elastomeric plastic cover (9) (see the specification from line 19 of page 6 to line 3 of page 7 and from line 20 of page 8 to line 3 of page 9; and Figs. 1, 3, and 5).

Independent claim 20 is directed to a gate plate for an automatic gear shift mechanism which has engagement holes (4, 5) for glidingly accommodating movable gear shift mechanism engagement elements (see the specification at

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page 1, lines 5-10; and Figures 1-5). The gate plate includes at least three stamped metal sheet parts (1, 18, 19) stacked together sandwiched (see the specification at lines 6-20 of page 8, and lines 16-19 of page 9; and Figs. 4 and 5). Each of the metal sheet parts (1, 18, 19) includes at least one engagement hole (4, 5) aligned with engagement holes (4, 5) in the other metal sheet parts (1, 18, 19) (see the specification at lines 10-16 of page 6, lines 11-14 of page 8, and lines 16-19 of page 9; and Figures 1, 3, and 5). An elastomeric plastic cover (9) is provided to surround at least a portion of the engagement hole (5) in the middle one (1) of the metal sheet parts (1, 18, 19) (see the specification from line 19 of page 6 to line 3 of page 7 and from line 20 of page 8 to line 3 of page 9; and Figs. 1, 3, and 5).

Grounds of Rejection to Be Reviewed on Appeal

Claims 1, 4, 8, 20, 24, and 25 have been rejected under 35 U.S.C. §102(e) as being anticipated by *Sander* (US 6,182,527).

Argument

Rejection under 35 u.s.c. §102(e) over *sander* (us 6,182,527)

The Examiner finally rejected Claims 1, 4, 8, 20, 24, and 25 under 35 U.S.C. §102(e) as being anticipated by *Sander* (US Patent 6,182,527). The final rejection is improper because Applicants' Declaration, submitted under 37 CFR 1.131 with the February 11, 2004 Amendment, establishes that the *Sander* patent is not prior art under 35 U.S.C. §102(e).

Claims 1, 4, and 8

When any claim of an application is rejected, a declaration may be submitted to establish invention of the subject matter of the rejected claim prior to the effective date of the reference on which the rejection is based. 37 CFR §1.131(a) (2005). However, prior invention may not be established if the

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rejection is based upon a reference which claims the same patentable invention as defined in 37 CFR §41.203(a), in which case an applicant may suggest an interference. 37 CFR §1.131(a)(1) (2005).

37 CFR §41.203(a) states “[a]n interference exists if the subject matter of a claim of one party would , if prior art, have anticipated or rendered obvious the subject matter of a claim of the opposing part *and vice versa*.” (Emphasis added). Under this two-way test, invention “A” is the same patentable invention as an invention “B” only when invention “A” anticipates or makes obvious invention “B,” and invention “B” anticipates or makes obvious invention “A.” *Eli Lilly v. Bd. of Regents of the Univ. of Wash.*, 334 F.3d 1264, 1268 (Fed. Cir. 2003). This two-way unpatentability test has always been used by the US PTO to determine whether claimed inventions interfere. 69 Fed. Reg. 49969 (August 12, 2004). The one-way unpatentability test has never been the standard for interfering subject matter and has been rejected by the US PTO as “unworkable.” 69 Fed. Reg. 49992.

Importantly, the fact that the patent may *disclose* subject matter claimed by an applicant is not a basis for interference if the patent does not *claim* that subject matter. *Manual of Patent Examining Procedure (MPEP)*, §2306 (8th ed. 2004).

Applicants submitted, together with the February 11, 2004 Amendment, a Declaration under 37 CFR 1.131 showing that the claimed invention was made prior to July 2, 1999, which was the filing date of the *Sander* patent.

The Declaration can be used under 37 CFR §1.131(a)(1) to establish prior invention over *Sander*, because under the two-way unpatentability test *Sander*’s claimed invention is not the same as Applicants’ claimed invention. For example, *Sander*’s claimed invention does not anticipate or make obvious Applicants’ claimed invention.

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With respect to Applicants' independent Claim 1, *Sander's* claimed invention does not teach or suggest three stamped parts that lie flat *sandwiched* against one another. *Sander* claims a first flat latching part and additional flat latching parts, but does not claim that the latching parts are sandwiched against one another. Additionally, the three stamped parts of Applicants' Claim 1 each have at least two engagement holes. *Sander*, on the other hand, claims only "openings formed in the additional parts," but does not claim that the first flat latching part has any engagement holes. Furthermore, Applicants' Claim 1 recites that the engagement holes in the stamped parts are arranged *congruently* with respect to one another. *Sander* does not claim this limitation.

Consequently, Claim 1 is not the same as any of *Sander's* claims under the two-way unpatentability test. And each of the rejected claims depending from Claim 1 (i.e. each of Claims 4 and 8), therefore, is also not the same as any of *Sander's* claims.

The Examiner raised several arguments in the final Office Action dated November 3, 2004 (see paragraphs 1 and 3 on page 5). However, these arguments are insufficient to establish that *Sander's* claimed invention is the same as Applicants' claimed invention under the two-way unpatentability test.

First, the Examiner stated that "reasons are not required to reject the claims when the language of the claim have been anticipated by the reference and discussed in the rejections." (See paragraph 1 on page 5 of the Office Action dated November 3, 2004.) This statement was made in response to Applicants' argument that the Examiner had failed to provide reasons to support that *Sander's* claimed invention is the same as Applicants' invention. It is not clear to Applicants what the Examiner meant by this statement. And the Examiner provided no legal authority to support this statement. Therefore, this statement does not establish that *Sander's* claimed invention is the same as Applicants' invention.

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It should be noted again that under 37 CFR §1.131(a)(1) a declaration may not be used if the rejection is based upon a reference which *claims* the same invention. In such a case, interference should be declared. The MPEP also makes it clear that the fact that the patent may disclose an applicant's claim is not a basis for interference if the patent does not claim that subject matter. *MPEP* §2306. Therefore, *Sander's* disclosure, if not claimed, cannot be used in the two-way unpatentability test.

Second, the Examiner argued that for anticipation the reference must teach the claimed invention either explicitly or impliedly. He then proceeded to argue that it is implied that the sheet parts of *Sander* are sandwiched. (See paragraph 2 on page 5 of the Office Action dated November 3, 2004.) For the following reasons Applicants respectfully disagree.

The Examiner's arguments are wrong in law because he used the wrong legal standard, "impliedly," for anticipation. "A claim is anticipated only if each and every element as set forth in the claim is found, either *expressly or inherently* described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). To establish inherency, the missing limitation must be *necessarily* present in the reference, and it would be so recognized by persons of ordinary skill in the art. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). Inherency may not be established by probabilities or possibilities. *Id.* Therefore, the "impliedly" standard is not part of the test for anticipation.

Even under the Examiner's own "impliedly" standard, his arguments are insufficient to establish anticipation, because he failed to provide any explanation why it is implied that the sheet parts of *Sander* are sandwiched. The MPEP requires that the Examiner properly communicate the basis for a rejection so that an applicant can be given fair opportunity to reply. *MPEP*,

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§706.02(j). The MPEP further requires that where a claim is refused for any reason relating to the merits thereof the ground of rejection should be fully and clearly stated. *MPEP*, §707.07(d).

The Examiner's third argument is that the claims of *Sander* and Applicants' claims are "obvious variants." Again the Examiner failed to provide any explanation for his argument. As stated previously, such an argument does not provide fair opportunity for Applicants to reply, and is insufficient to support a rejection.

For the foregoing reasons, the rejection of Claims 1, 4, and 8 under 35 U.S.C. §102(e) as being anticipated by *Sander* is in error, and the Board is respectfully requested to reverse the rejection.

Claims 20, 24, and 25

Applicants' arguments against the rejection of Claims 1, 4, and 8 apply to the rejection of Claims 20, 24, and 25, except the argument that *Sander's* claimed invention is not the same as Claim 1 under the two-way unpatentability test. The reasons why *Sander's* claimed invention is not the same as Claim 20 under the two-way unpatentability test are separately provided below.

Sander's claimed invention does not anticipate or make obvious Applicants' Claim 20. For example, *Sander* does not claim "at least three stamped metal sheet parts stacked together *sandwiched*." *Sander* also does not claim "*each* of said metal sheet parts including at least one engagement hole." And *Sander* does not claim that the engagement holes are "*aligned*."

Consequently, Claim 20 is not the same as any of *Sander's* claims under the two-way unpatentability test. And each of the rejected claims depending from Claim 20 (i.e. each of Claims 24 and 25), therefore, is also not the same as any of *Sander's* claims.

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December 5, 2005

For the foregoing reasons, the rejection of Claims 20, 24, and 25 under 35 U.S.C. §102(e) as being anticipated by *Sander* is in error, and the Board is respectfully requested to reverse the rejection.

Respectfully submitted,

December 5, 2005

Song Zhu, Ph.D.
Registration No. 44,420

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Application No. 10/043,277
Response to Notification of Non-Compliant Appeal Brief
December 5, 2005

Claims Appendix

The claims on appeal read as follows:

1. A functional component as a gate plate of an automatic gear shift mechanism with a locking gate, having engagement holes for engagement elements which kinetically interact with the functional component, wherein the functional component comprises at least three stamped parts, which lie flat sandwiched against one another, are unreleasably connected to one another and each have at least two engagement holes for engagement elements which kinetically interact with the functional component, the engagement holes in the stamped parts being arranged congruently with respect to one another, at least one of said holes, in a middle one of the stamped parts, having a hole wall which is provided with an elastomeric plastic cover.

4. Functional component according to Claim 1, wherein the plastic cover is formed by injection-moulding plastic around a hole edge.

8. Functional component according to Claim 4, wherein spacer lugs are formed from a material which is harder than the injection-moulded plastic on inner sides, of the outer stamped parts which face towards the middle stamped part.

20. A gate plate for an automatic gear shift mechanism which has engagement holes for glidingly accommodating movable gear shift mechanism engagement elements, comprising:

at least three stamped metal sheet parts stacked together sandwiched, each of said metal sheet parts including at least one engagement hole aligned with engagement holes in the other metal sheet parts,

and an elastomeric plastic cover provided to surround at least a portion of the engagement hole in a middle one of the metal sheet parts.

Application No. 10/043,277
Response to Notification of Non-Compliant Appeal Brief
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24. A gate plate according to Claim 20, wherein the elastomeric plastic cover is clicked into place on said metal part.

25. A gate plate according to Claim 20, wherein the elastomeric plastic cover is injection-moulded onto the middle part.

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December 5, 2005

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Evidence Appendix

The attached Declaration under 37 CFR 1.131 was submitted on February 11, 2004 and was entered by the Examiner (see the Office Action dated May 6, 2004).

BEST AVAILABLE COPY**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No. : 09/726,589 Confirmation No. : 1848
Applicant : ERIK KRIMM ET AL
Filed : DECEMBER 1, 2000
TC/A.U. : 3679
Examiner : ERNESTO GARCIA

Docket No. : 225/49427
Customer No. : 23911

Title : GEAR SHIFT MECHANISM GATE PLATE ASSEMBLY
AND METHOD FOR PRODUCING SAME

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR § 1.131

Sir:

We, Erik Krimm and Michael Siemers, hereby declare that:

We are the inventors of U.S. Patent Application Serial No. 09/726,589,

We had conceived the invention disclosed and claimed in the above-identified U.S. patent application prior to July 2, 1999;

The invention is evidenced by the enclosed Invention Disclosure (dates redacted) and its English translation. The Invention Disclosure was submitted prior to July 2, 1999, to the inventors' employer, Daimler-Benz AG, for evaluation and for the preparation of German Patent Application 199 57 776.5, the priority of which was claimed by the present application; and

We were diligent from July 2, 1999 to December 1, 1999, the filing date of German Patent Application 199 57 776.5.

Application No. 09/736,689
Declaration Under 37 CFR § 1.131

All statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and/or imprisonment, or both under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

6th Feb., 2004


Erik Krimm

5th Feb., 2004


Michael Sjemers

DAIMLERBENZ

AKTIENGESELLSCHAFT

Daimler-Benz AG · 70546 Stuttgart

**HERRN
MICHAEL SIEMERS****SKO - WERK 068****☒ HBG**Telefon
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Ihr Zeichen, Ihre Nachricht vom

Unser Zeichen, unsere Nachricht vom
FTP/P anName
Herr Auer

Datum

**Ihre Dienstleistungsmeldung Daim 29131/
"KOMBINATION VON ANSCHLAGDAEMPfung UND VERBINDUNG MEHRERER
BLECHE (Z.B. STANZTEILE) MITTELS KUNSTSTOFFUMSPRITZUNG"**

Sehr geehrter Herr Siemens,

Ihre obige Dienstleistungsmeldung ist bei uns am [REDACTED] eingegangen.

Wir sind in eine vorläufige Prüfung eingetreten und werden in Kürze wieder auf Sie zukommen.

Weitere(r) Beteiligte(r) an der Erfindung: Erik Krimm

Mit freundlichen Grüßen
Daimler-Benz Aktiengesellschaft

gez. i.V. Niedermann

gez. i.A. Groh

Bitte zukünftige Arbeitsplatzwechsel oder Änderungen der Privatanschrift sofort der Patentabteilung bekanntgeben!Telefon (07 11) 17-0
Telefax (07 11) 17-2 22 44Daimler-Benz Aktiengesellschaft
Stz: Stuttgart, Registergericht StuttgartVorstand: Jürgen E. Schrempf, Vorsitzender;
Dr. rer. nat. Manfred Rietzsch, Dr. rer. nat. Eckhard Corpes,

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Ihr Zeichen, Ihre Nachricht vom

Unser Zeichen, unsere Nachricht vom
FIP/P anName
Herr AuerDatum
[REDACTED]

Ihre Dienstleistungsmeldung Daim 29131/
"KOMBINATION VON ANSCHLAGDAEMPFGUNG UND VERBINDUNG MEHRERER
BLECHE (Z.B. STANZTEILE) MITTELS KUNSTSTOFFUMSPRITZUNG"

Sehr geehrter Herr Krimm,

Ihre obige Dienstleistungsmeldung ist bei uns am [REDACTED] eingegangen.

Wir sind in eine vorläufige Prüfung eingetreten und werden in Kürze wieder auf Sie zukommen.

Weitere(r) Beteiligte(r) an der Erfindung: Michael Siemers

Mit freundlichen Grüßen

Daimler-Benz Aktiengesellschaft

gez. i.V. Niedermann ✓

gez. i.A. Groh

Bitte zukünftige Arbeitsplatzwechsel oder Änderungen der Privatanschrift sofort der Patentabteilung bekanntgeben!

Firmenangehöriger der

☐ Daimler-Benz AG☐ Mercedes-Benz AG

Mercedes-Benz AG

Patentstrategie

00-C104

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7000 Stuttgart 60

☐ Sonstige

Dienstfindungsmeldung

Aktenzeichen der
Patentabteilung

29131/22

Eingangsvermerk
der Patentabteilung

[Redacted] sp

H. Auer

Ich (Wir),

Titel, Vor- und Zuname	Beruf	Stellung (Betrieb*)	Werk	Telefon	Abteilung	PLZ, Wohnort, Straße	Staatsangeh.
a) Dipl.-Ing. Erik Krümm	Maschb. Ing.	SB	68	2602	TV14	22607 Hamburg Stiefmütterchenweg 24	D
b) Dipl.-Ing. Michael Siemers	Fahrz. Ing.	SB	68	2746	SKO	20255 Hamburg Heinrichweg 20	D
c)							
d)							
e)							
f)							

*) z.B. Vorarbeiter, Sachbearbeiter, Hauptabteilungsleiter

habe(n) die in der Anlage beschriebene Erfindung betreffend

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bei welchem?

Im Falle einer Meldung beim Betrieblichen Vorschlagswesen werde(n) ich(wir) die Patentabteilung benachrichtigen.

Bitte Rückseite beachten!

DAIMLERBENZ

AKTIENGESELLSCHAFT

2005/12/05

Daimler-Benz AG, Abteilung TVM, Postfach 910164, 21160 Hamburg

Werk Hamburg

An
Daimler-Benz AG, W19
Z. Hd. Herrn Michael Lierheimer
HPC C106

70332 Stuttgart

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UT. [REDACTED]			
Z. Erledigung	FTP/E	FTP/P	FTP/S
Frist			

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Unser Zeichen, unsere Nachricht vom
krTelefon
(0 40) 7920 - 2602Telefax-Durchwahl
(0 40) 7920 - 2938Bearbeiter
Herr KrimmDatum
[REDACTED]

Diensterfindungsmeldung zum Thema „Kombination von Anschlagdämpfung und Verbindung mehrerer Bleche (z.B. Stanzteile) mittels Kunststoffumspritzung“

Sehr geehrter Herr Lierheimer,

hiermit übersende ich Ihnen eine Diensterfindungsmeldung zum Thema „Kombination von Anschlagdämpfung und Verbindung mehrerer Bleche (z.B. Stanzteile) mittels Kunststoffumspritzung“ und bitte Sie um Prüfung und Einleitung einer Patentrecherche.

Mit freundlichen Grüßen

[Signature]

Krimm

*Transpurchaser schreiben noch mal
f. Herrn Krimm*



Mercedes-Benz

Daimler-Benz Aktiengesellschaft
Stb. Stuttgart Registergericht Stuttgart
HRB-Nr. 15 350

Vorstand Jürgen E. Schnepf; Vorsitzender:
Dr. rer. pol. Manfred Bischoff; Dr. rer. pol. Eckhard Cordes;
Dr. jur. Manfred Gentz; Jürgen Hubbert;
Dr. phil. Kurt J. Lauck; Dr. jur. Klaus Mangoldt; Helmut Tropitzsch;

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DAIMLERBENZ

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2. 3. 3. 1. 1. 24. 24.

Werk Hamburg

Krimm/Slamers
Tel.: 040 / 7920 2602
Fax: 040 / 7920 2938
~~XXXXXXXXXX~~

Dienstleistungsmeldung zur Kombination von Anschlagdämpfung und Verbindung mehrerer Bleche (z.B. Stanzteile) mittels Kunststoffumspritzung

1. Stand der Technik

Seite 25214/4

Für verschiedene Anwendungsfälle werden Stanzteile mit feinen Konturen, die zur Übertragung hoher Kräfte große Querschnitte benötigen, in Sandwichbauweise dargestellt. Die Verbindung des Sandwichpaketes wird über separate Niete oder Schweißpunkte realisiert. Zur Geräuschdämpfung einzelner Bereiche werden zusätzliche Kunststoffteile benötigt, die entweder eingeclipst oder in Hinterschnitten, Aussparungen usw. befestigt werden müssen.

2. Aufgabe, die demgegenüber zu lösen ist

von Sperrfunktion an der Lastver-

Scheibe zur Übertragung der Kräfte von
Auf geringem Bauraum müssen gedämpfte Flächen zur Minimierung von Anschlaggeräuschen und ungedämpfte Bereiche als Funktionsflächen zur Kraftübertragung (Sperrfunktion) mit feinen Konturen realisiert werden.

2

3. Vorteile gegenüber dem Bekannten

- Durch Kombination von aufgebrachtener Dämpfung und Verbindung der einzelnen Blechteile können mehrere Einzelteile entfallen (Clipselemente, Verbindungselemente, Niete, etc.).
- Durch die Einsparung von Einzelteilen entfallen ebenfalls kostenaufwendige Montage- und Schweißvorgänge.
- Durch die flexiblen aufgespritzten Kunststoffdome ist eine optimale Kraftübertragung durch die bessere Ausrichtung der einzelnen Scheiben zur Krafteingriffslinie möglich.
Beständigkeit ist gegeben, sonst würde die Verformung sehr hoch: Bauteil versagt
- Zusätzliche Prägevorgänge an den Stanzteilen bzw. eine aufwendige Formgestaltung und zusätzliche Bohrungen für Kunststoffeinspritzteile oder -clipse können eingespart werden.
- In der Auslegung von gedämpften und ungedämpften Bereichen sind weitreichende Gestaltungsmöglichkeiten vorhanden.

Werk Hamburg

Krimm/Siemers
Tel.: 040 / 7920 2602
Fax.: 040 / 7920 2938

4. Beschreibung eines speziellen Anwendungsbeispiels

Drei Bauteile werden in einem Werkzeug mit hoher Genauigkeit und allen erforderlichen Funktionskonturen gestanzt. Vier Bohrungen dienen zur Verbindung der Einzelteile. Die mittlere Scheibe wird mit Kunststoff umspritzt. Über Verbindungskanäle (1) *im Werkzeug* werden zusätzlich zu den zu dämpfenden Bereichen (2) vier Dome (3) ausgebildet. Nach der Fertigstellung werden die äußeren Scheiben über die Bohrungen auf den Domen positioniert. Die überstehenden Dome zur Herstellung einer formschlüssigen Verbindung (4) werden daraufhin thermisch umgeformt. Zusätzliche Durchstanzungen in den Blechteilen verhindern beim Aufpressen der Kurvenscheiben auf die Welle eine Beschädigung der Umspritzung. *in Werkzeug*

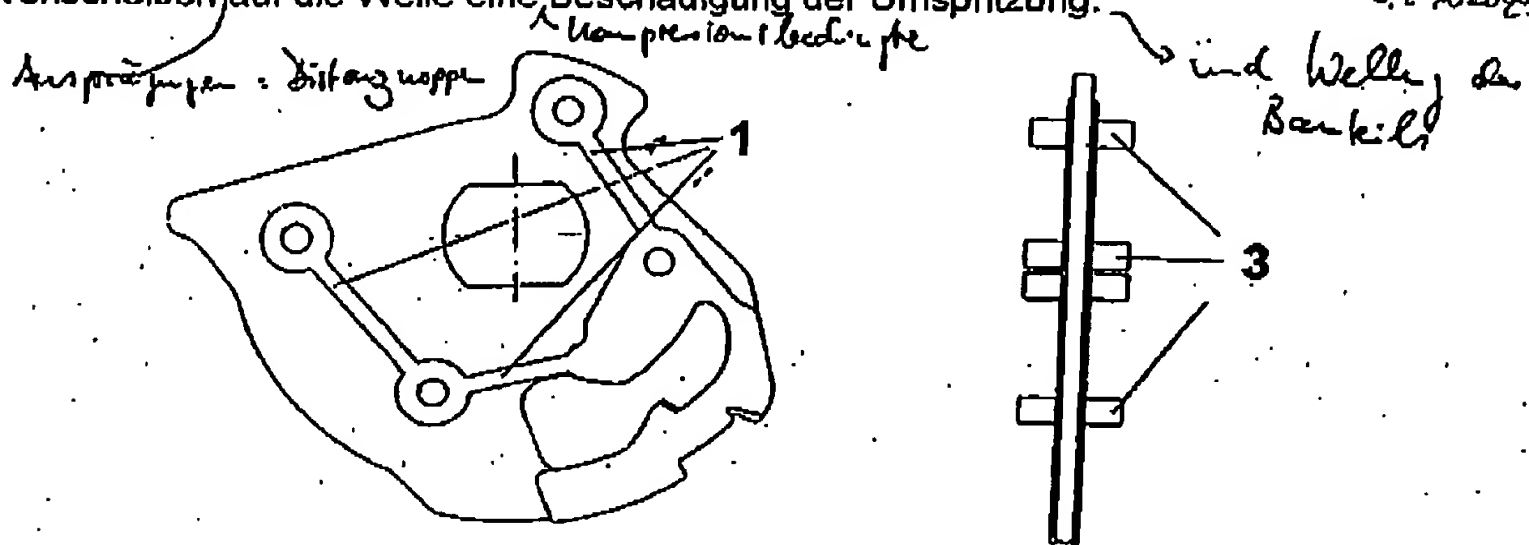


Bild 1: Mittlere Scheibe mit Kunststoffumspritzung
A - A

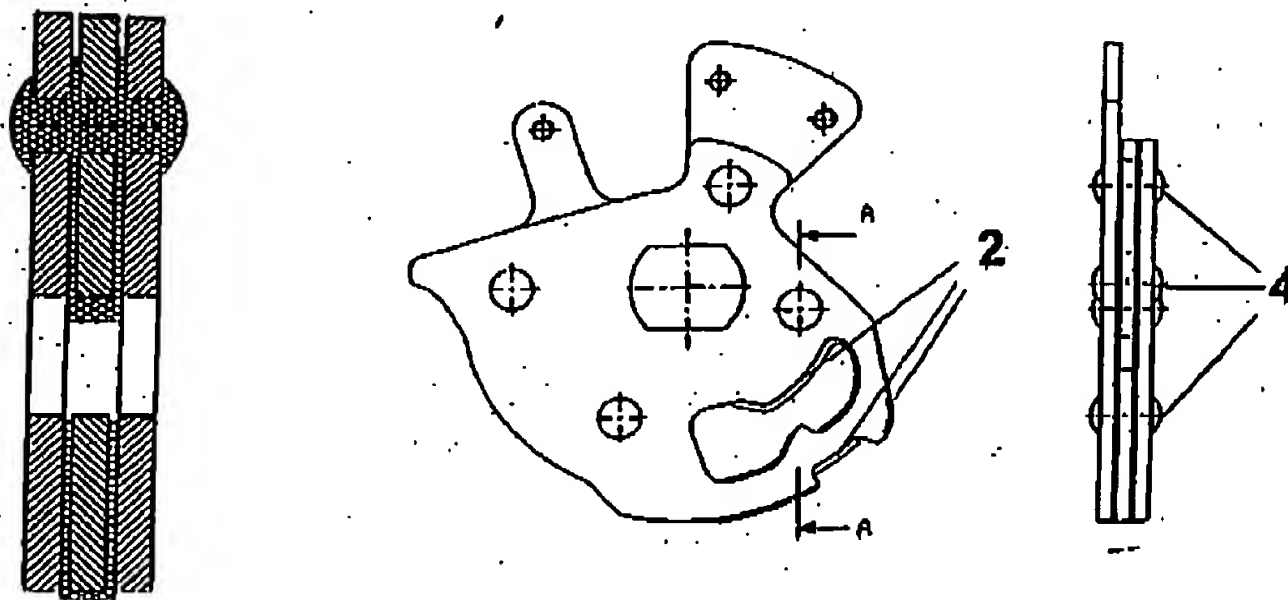


Bild 2: Komplettes Kurvenscheibenpaket.

DAIMLERBENZ
AKTIENGESELLSCHAFT

2005/1/17

Werk HamburgKrimm/Siemers
Tel.: 040 / 7920 2602
Fax.:040 / 7920 2938
[REDACTED]**5. Anwendungsmöglichkeiten**

Wie unter Punkt 4 beschrieben, wird in der Tippschaltung (A 220 267 04/05 24) für die neue S-Klasse (W220) eine umspritzte, dreiteilige Kurvenscheibe mit diversen Sperr-, Betätigungs- und Geräuschkämpfungsfunktionen in der Serie (REDACTED) zum Einsatz kommen.

Ein weiterer Einsatz als Kurvenscheibe mit ähnlichen Funktionen ist in den Schaltungen für die Baureihen W210 / W202 / W208 / R170 / W163 (Änderungsjahr [REDACTED]) geplant.


Krimm
Siemers

TRANSLATION: Letter of DaimlerBenz of

Your Service Invention Application Daim 29131

**"COMBINATION OF NOISE ABSORPTION AND JOINING SEVERAL SHEET-METAL
PIECES (E.G. STAMPINGS) TOGETHER BY MEANS OF SPRAYING WITH PLASTIC"**

Dear Herr Krimm:

Your above application for a service invention reached us on:

We have begun a preliminary examination and will get back to you soon.

Other participants in the invention: Michael Siemers.

Yours truly.....

signed

Please inform the Patent Department immediately in the event of future changes of address.

TRANSLATION: Letter of DaimlerBenz of

Your Service Invention Application Daim 29131

**"COMBINATION OF NOISE ABSORPTION AND JOINING SEVERAL SHEET-METAL
PIECES (E.G. STAMPINGS) TOGETHER BY MEANS OF SPRAYING WITH PLASTIC"**

Dear Herr Siemens:

Your above application for a service invention reached us on

We have begun a preliminary examination and will get back to you soon.

Other participants in the invention: Erik Krimm

Yours truly.....

signed

Please inform the Patent Department immediately in the event of future changes of address.

Hamburg Plant

To:
Daimler [sic] Benz AG, W19
Attention: Herr Michael Lierheimer
HPC C 106
70332 Stuttgart

[Received stamp date:]

Service invention application entitled: "Combination of noise absorption and fastening several pieces of metal (stampings) by plastic circuminjection.

Dear Herr Lierheimer:

I send you herewith a service invention application on the subject "Combination of noise absorption and fastening several metal pieces (e.g., stampings) by plastic circuminjection" and request your examination and institution of a patent search.

Yours truly....

[illegible note in handwriting]

Service invention application for the combination of noise damping and joining of several metal parts (e.g., stampings) by plastic circuminjection.

1. State of the art:

For various applications, stampings with fine contours which require large cross sections for the transfer of great forces are made by sandwich construction. The assembly of the sandwich packet is achieved by several rivets or spot welds. To suppress noise in some areas, additional plastic parts are needed, which have to be clipped on or fastened in undercuts, openings etc.

2. Problem which is to be solved in that regard

In a small space, damped [cushioned] surfaces must be made with fine contours to minimize clashing noises and undamped areas must be made with fine contours as operative surfaces for the transmission of force (blocking function). *[Translator's note: I am unable to read the handwritten marginal note followed by a question mark.]*

3. Advantages over the prior art

- By a combination of applied cushioning and binding of the individual metal parts several individual parts can be eliminated (clips, fasteners, rivets, etc.).
- By the saving of parts, costly assembly and welding procedures are also eliminated.
- By the flexible spraying on of plastic domes an optimum force transmission is possible due to the better alignment of the individual disks with the line of application of force. *[Translator's note: I am unable to read the handwritten marginal note followed by a question mark.]*
- Additional embossing procedures on the stampings or a complicated shaping and additional drilling for plastic inserts or clips can be avoided.
- In the layout of damped and undamped areas extensive configuration possibilities are available.

4. Description of a particular application

Three components are punched in a die with great accuracy and all necessary working shapes. Four bores serve to fasten the parts together. The middle plate is circuminjected with plastic. Through connecting channels (1) four domes (3) are formed in addition to the areas (2) that are to be damped. After finishing, the outer plates are positioned on the domes over the bores. The upstanding domes are then thermally shaped to produce a mating junction (4). Additional holes punched in the metal parts prevent damage [due to pressure] to the circuminjection when the curved plates are pressed onto the shaft.

Figure 1: Middle plate with plastic circuminjected.

Figure 2: Completed cam disk packet

5. Possible Uses

As described under point 4, in the tilt circuit (A 220 267 04/05 24) for the new S class (W220) a circuminjected, three-part cam disk with various locking, actuating and noise suppression functions are used in the series.

Further use as cam disk with similar functions is planned in the gearshifts for the series W210 / W202 / W208 / R170 / W163 (change year).

Application No. 09/726,589
Response to Notification of Non-Compliant Appeal Brief
December 5, 2005

Related Proceedings Appendix

None.

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